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ABSTRACT

The nature of adolescent sexuality, pregnancy and childbearing is undergoing important transformations that have made early parenthood more visible and problematic. A review of the literature confirms that adolescent pregnancy is far from a random event. Research indicates differences, often substantial, among those who have sex or abstain and their responses to pregnancy. There is strong evidence that those who avoid pregnancy during adolescence will acquire more of the education needed to realize full potential as a self-sufficient adult. Adolescents need support in combatting the effects of peer influence and in defining career goals which might motivate them to avoid pregnancy. Provision of services by the school or community might also help reduce the negative aspects of adolescent parenthood. (JAC)

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TEENAGE PARENTHOOD: A REVIEW OF RISKS AND CONSEQUENCES

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PREFACE

This Note is the third product of a Rand study of the educational implications of adolescent pregnancy and parenthood, with support from the National Institute of Education (Contract No. 400-78-0064). The study has three major objectives:

1. To understand how junior and senior high school students who become pregnant decide whether to drop out of school, to continue in school without significant interruption, to marry or remain single.
2. To assess the current role of schools in the decisions of pregnant and parenting students to continue in school.
3. To determine whether there are exemplary programs, schools, or school districts that effectively serve the many needs of pregnant students and teenage mothers.

The Note reviews the research literature on the demographic correlates of teenage pregnancy and the effects of early parenthood on young parents. The first product, The Response of the Schools to Teenage Pregnancy and Parenthood (R-2759/NIE), contains an analysis of data collected in 11 school districts around the country during the school year 1979-1980. The second, A Title IX Perspective on the Schools' Response to Teenage Pregnancy and Parenthood (R-2767/OCR), analyzes study findings in light of the equity requirements of Title IX of the 1972 Education Amendments.

SUMMARY

The nature of adolescent sexuality, pregnancy, and childbearing is undergoing important transformations that have rendered the circumstances of early parenthood more visible and problematic. This Note examines three specific concerns surrounding adolescent reproduction: (1) which groups are most at risk for pregnancy and parenthood, (2) the effects of early parenthood on the parents, and (3) which groups are most vulnerable to these effects. Drawing on the published and unpublished social science research literature, we seek to elucidate these issues as one component of a larger inquiry into how formal and informal school policies and programs may encourage school completion and mitigate the costs of early parenthood.

Becoming a parent during adolescence is a far from random event. Available research indicates differences, often substantial, among those who have sex or abstain, who contracept or not, who choose to abort or carry to term, and who marry or remain single.

Parenthood reduces adolescents' life chances in a variety of ways, and the effects generally are stronger the younger the age at which the first birth occurs. Research often cannot establish whether pregnancy and parenthood play a critical causal role; however, there is strong circumstantial evidence that a person who manages to avoid parenthood during adolescence will acquire more of the schooling and training necessary to realize her or his full potential as a self-sufficient adult and will be better off economically and socially in adulthood.

The deleterious consequences of adolescent parenthood are not

inevitable. Research findings reviewed in this Note suggest how its incidence could be reduced and its negative effects lessened.

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TEENAGE PARENTHOOD: A REVIEW OF RISKS AND CONSEQUENCES

I. INTRODUCTION

In 1978, a little more than one million 15-to-19-year-olds experienced pregnancies. More than 880,000 of these pregnancies were premarital, and most were unplanned or unwanted or both (National Center for Health Statistics, 1978). A sizable fraction also were avoidable: It is estimated that in 1976 there would have been 40 percent fewer premarital pregnancies (467,000 instead of 780,000) if all the teenagers who did not intend to give birth had practiced contraception consistently (Zelnik and Kantner, 1978).

Whether outside or within marriage, early parenthood affects adolescents' life-chances in many ways, deflecting young people from their goals and restricting their options in both obvious and subtle ways:

- o Truncation of further education: Pregnancy and motherhood are major reasons for leaving school, figuring in a substantial percentage of all dropouts among female students. Many such dropouts report concrete and realistic pre-pregnancy educational aspirations; it seems plausible that they would be in school were it not for an early first birth.
- o Curtailment of economic achievement: Women who begin childbearing in their teens have disturbed the process by which success is achieved in the marketplace. Although it is difficult to assess the exact impact on labor force

participation, earnings, or the type of job held, it is clear that the teenage mother and sometimes the father suddenly confront a distinct set of problems that force each to redirect her or his intended life course.

- o Predisposition toward further unwanted childbearing: Pregnancy in early adolescence often signals the beginning of a rapid succession of unwanted births.

Early childbearing, then, may reduce the adolescent's prospects for a successful economic and family career. These problems may require society to intervene with costly social services, immediately or in the longer term.

BACKGROUND

Early pregnancy and childbearing are phenomena of long standing. Yet, until recently, they have been viewed as exclusively personal matters of little or no direct concern to the larger society. Increasingly, however, teenage pregnancy and parenthood have been seen as matters of more general interest and concern. Teenage pregnancy has come to be acknowledged as an event that compels important choices which have long-term implications for the individual and society. These choices concern issues that have aroused considerable controversy: teenage contraception, sex education, adoption, single parenthood, and availability of and access to legal abortion.

Adolescent reproduction itself is undergoing important transformations (Baldwin, 1977; 1978; 1981). Over the past two decades, birthrates for older teenagers (who make up the majority of adolescent

childbearers) have declined sharply (Table 1), and the total number of births to teenagers is now declining. These overall figures, however, mask important shifts toward relatively more childbearing at younger ages. For one thing, because the adult birthrate has declined more sharply than the teenage birthrate, births to teenagers comprise a

Table 1

BIRTHS PER 1,000 WOMEN 14-19 YEARS OF AGE, BY SINGLE YEARS OF AGE, FOR ALL WOMEN: UNITED STATES, 1940-1978

(highest rates underlined)

Period	14	15	16	17	18	19
1940-44	4.0	12.7	27.8	52.2	81.7	109.2
1945-49	4.9	15.5	34.1	63.7	99.4	133.0
1950-54	5.9	19.3	43.1	79.7	123.1	162.6
1955-59	6.0	20.1	45.7	85.8	136.2	184.0
1960-64	5.4	17.8	40.2	75.8	122.7	169.2
1965	5.2	16.5	36.0	66.4	105.4	142.4
1966	5.3	16.4	35.5	64.8	101.8	136.1
1967	5.3	16.5	35.3	63.2	97.5	129.5
1968	5.7	16.7	35.2	62.6	95.7	125.2
1969	6.0	17.4	35.8	63.1	95.7	124.5
1970	6.6	19.2	38.8	66.6	98.3	126.0
1971	6.7	19.2	38.3	64.2	92.4	116.1
1972	7.1	20.1	39.3	63.5	87.1	105.0
1973	7.4	20.2	38.8	61.5	83.1	98.5
1974	7.2	19.7	37.7	59.7	80.5	96.2
1975	7.1	19.4	36.4	57.3	77.5	92.7
1976	6.8	18.6	34.6	54.2	73.3	88.7
1977	6.7	18.2	34.5	54.2	73.8	89.5
1978	6.3	17.2	32.7	52.4	72.2	88.0
Percent Decline from Highest Rate to 1978	15%	15%	28%	39%	47%	52%

SOURCE: Baldwin (1981), Table 2.

larger fraction of all U.S. births than in the 1960s (17 percent in 1977). More important, birthrates for younger teenagers have scarcely declined at all. As a result, very young adolescents now account for more of the births that occur to teenagers, as shown below:

DISTRIBUTION OF TEENAGE BIRTHS, BY MOTHER'S AGE, 1978

(Percent)

Year	<15 yrs.	15-17 yrs.	18-19 yrs.	Total all ages
1960	1.2	29.2	69.6	100%
1978	1.9	36.6	61.5	100%

SOURCE: Baldwin, 1981.

In addition to this shift toward more childbearing in the earlier years of adolescence, out-of-wedlock childbearing has increased markedly at all adolescent ages. From Table 2, the trend toward out-of-wedlock childbearing is apparent in the absolute numbers, though the rate of such births to women under 20 declined for the first time from 1976 to 1978 (number of out-of-wedlock births per 1000 unmarried women). In actual numbers, out-of-wedlock births to teenagers have more than doubled, from 92,000 in 1960 to 249,000 in 1978. This increase has come about not because out-of-wedlock conceptions have increased but because fewer such conceptions now lead to marriage (Baldwin, 1976; see also O'Connell, 1978).

Throughout most of the 1960s and 1970s, the sheer number of potential adolescent parents increased as the large cohorts of baby-boom children entered their teens. This demographic compression effect is

Table 2

OUT-OF-WEDLOCK CHILDBEARING, 1960, 1970, 1976, AND 1978

Item	1960	1970	1976	1978
Total number of births	4,257,850	3,731,386	3,167,788	3,333,279
Out-of-wedlock births	224,300	398,700	468,000	543,900
Number to women under 20	91,700	199,900	235,300	249,100
Percent to women under 20	40.9	50.1	50.2	45.8
Number to ages 18-19	43,400	94,300	108,500	123,200
Number to ages 15-17	43,700	96,100	116,500	116,500
Number to women under 15	4,600	9,500	10,300	9,400
Illegitimacy rate				
Women 15-19	15.3	22.4	24.0	25.4
Women 20-24	39.7	38.4	32.2	36.1

SOURCES: National Center for Health Statistics, Monthly Vital Statistics Report, "Final Natality Statistics, 1970," Vol. 22, No. 12, Supplement, March 20, 1974; "Final Natality Statistics, 1976," Vol. 26, No. 12, Supplement, March 29, 1978; "Final Natality Statistics, 1978" Vol. 29, No. 1, Supplement, April 28, 1980; idem, Vital & Health Statistics, "Trends in Illegitimacy--United States, 1940-1965," Series 21, No. 15, October 1968.

now beginning to wane: The number of 14-to-19-year-olds will decline 18 percent between 1979 and 1989. However, this "decompression effect" is being offset by the increasing proportion of teenagers who are sexually active (Table 3). The number of sexually active adolescents may well increase in coming years, despite fewer adolescents overall.

In sum, the nature of adolescent sexuality, pregnancy, and childbearing are undergoing important transformations that have rendered the circumstances of early parenthood more visible and problematic. As more of the adolescent population has become sexually active, exposure to the risk of pregnancy has increased. Births to adolescents comprise a growing percentage of all U.S. births. Increasingly these births

Table 3

PERCENT UNMARRIED METROPOLITAN WOMEN EXPERIENCING SEXUAL INTERCOURSE, 1971, 1976, AND 1979

Age	1979	1976	1971
15-19	46.0	39.2	27.6
15	22.5	18.6	14.4
16	37.8	28.9	20.9
17	48.5	42.9	26.1
18	56.9	51.4	31.7
19	69.0	59.5	46.4

SOURCE: Melvin Zelnik and John F. Kantner, "Sexual Activity, Contraceptive Use and Pregnancy among Metropolitan-Area Teenagers, 1971-1979." Family Planning Perspectives, Vol. 12, No. 5, September/October 1980.

occur outside of marriage. Although the overall number of adolescents (and possibly even adolescent parents) will decline slightly in the years ahead, the contemporary adolescent and society appear to be more vulnerable than before to the unique risks that accompany early parenthood.

This paper examines three specific concerns surrounding adolescent reproduction: (1) which groups are most at risk for pregnancy and parenthood, (2) what are the effects of early parenthood on the parents, and (3) which groups are most vulnerable to these effects.

Drawing on the published and unpublished social science research literature, we seek to elucidate these issues as one component of a larger inquiry into how formal and informal school policies and programs may encourage school completion and mitigate the costs of early parenthood.

THE SCIENTIFIC LITERATURE: LIMITATIONS

An expanding scientific literature has documented the disruptions associated with adolescent reproduction, beginning with exposure to unplanned pregnancy and extending far into adulthood. While furnishing important insights, the evidence often carries inherent limitations (Haggstrom, et al., forthcoming).

First, the data on which many studies are based refer not to contemporary adolescent reproduction, but rather to contemporary adults who became parents in adolescence a number of years ago. The contraceptive circumstances that led to parenthood, along with then-prevailing norms regarding pregnancy and parenthood outside marriage, may have affected outcomes differently from the way they do now. Such studies therefore may be misleading if relied on blindly as a guide to the future outcomes of contemporary adolescent reproduction.

Second, many studies focus exclusively on adolescent parents and do not include adolescent nonparents. Thus, they cannot distinguish the effects of adolescent parenthood from the effects of adolescence because they cannot compare these parents with their nonparent peers. Where such comparisons are possible, the data often lack information on preexisting differences between those who subsequently became parents and those who did not. Without such information, interpretations necessarily remain tentative, since parenthood may be only spuriously related to the effect in question.

II. RISK OF PREGNANCY AND PARENTHOOD

Changing norms and behaviors surrounding sexual activity, contraceptive usage and pregnancy resolution decisionmaking contribute to an increasing risk of pregnancy and parenthood among teenagers. Some teenagers are more at risk than others, as described below.

SEXUAL BEHAVIOR

Three factors affect the risk of early conception: physiological capacity to conceive, frequency of sexual activity, and effectiveness of contraceptive practice. Research on each of these factors and how they interrelate helps to delineate segments of the adolescent population that are comparatively more vulnerable to this risk.

The physiological capacity to conceive (fecundity) commences at an earlier age among blacks than whites. By age eleven, 21 percent of blacks have attained menarche, compared with only 11 percent of whites. This is only a temporary differential, however; whites catch up by age 13, when three-fourths of all teenagers (both black and white) have attained menarche; and by age 14, over 90 percent have done so (National Center for Health Statistics, 1973). While the capacity to conceive obviously is necessary to conception, fecundity is a passive process. In contrast, sexual activity and contraceptive usage are two components of pregnancy risk that are under the individual's control. For this reason, they are more important, more policy-relevant and more complex behaviors.

Research on sexual activity among teenagers has focused almost exclusively on the initiation and frequency of intercourse. Little research attention has been paid to social or psychological factors that motivate sexual behavior or to costs and benefits teenagers derive from having sex. Our brief review of this literature reflects this emphasis.

Sexual activity among teenagers, measured in terms of frequency or nonvirginity, is increasingly common. While the percentage figures vary substantially from study to study, reflecting geographical, time and sample differences, the evidence indicates that the proportion of adolescents who are sexually experienced is substantial and increasing. Between 10 and 35 percent of 16-year-old unmarried teenage women who participated in these studies conducted in the late 1960s to mid-1970s described themselves as sexually experienced (Miller and Simon, 1974; Vener and Stewart, 1974; Brown et al., 1975; Zelnik and Kantner, 1978). There is evidence that this percentage is rising over time: One study of junior and senior high school students found that 16 percent of the girls were sexually experienced in 1970; the figure had risen to 22 percent in a comparable survey in 1973 (Vener and Stewart, 1974).

The most recent data corroborate these trends. For example, Hass (1979) reports 31 percent of the 15-16-year-olds in his sample have had intercourse; Zellman and Goodchilds (forthcoming) found that 54 percent of female respondents aged 14-16 in their socially heterogeneous urban sample described themselves as nonvirgins. In Zelnik and Kantner's most recent survey (1980) 30 percent of unmarried 15- and 16-year-old female respondents reported having had intercourse.

These and other data report substantial racial differences in sexual experience. Black women tend to initiate sexual activity at earlier ages than whites. Zelnik and Kantner report that at age 15, unmarried metropolitan blacks are more than twice as likely as their white peers to report having had intercourse. These data indicate a narrowing in the racial differential over time, but black teenagers continue to be more sexually active than whites at every age (Zelnik and Kantner, 1980). These racial differences also appear to hold when socioeconomic status is controlled (Zelnik and Kantner, 1972). Hispanic women under 18 are substantially less likely than white or black age peers to have had sex in adolescence (Zellman and Goldchilds, forthcoming).

Although whites may initiate sexual activity later, once initiated, the frequency of sexual activity is somewhat higher for white than black adolescents (Kantner and Zelnik, 1972).

CONTRACEPTIVE USE

While the studies reviewed above point to a growing percentage of teenagers at risk for pregnancy, pregnancy is a real and likely event only when contraceptive devices go unused or misused. Too often, this is precisely what happens. Frequently, sexual activity occurs prior to contraceptive protection (Reicheldt and Werley, 1976; Apkom et al., 1976; Zelnik and Kantner 1977; Mindick and Oskamp, 1977). Zelnik and Kantner (1980) found that half (49 percent) of their metropolitan sample had practiced contraception at their first intercourse, an improvement over the 38 percent rate in 1976. The proportion of always-users also

increased, from 29 percent in 1976 to 34 percent in 1979. However, well over half of the respondents to this same survey who were or had been premaritally pregnant and had not wished to conceive reported they had taken no measures to prevent their pregnancy. Summarizing a number of recent studies, Cvetkovich and Grote (1977) suggest that for those who adopt contraceptives there is a lag of 6-12 months between first intercourse and first contraceptive usage. This gap tends to be even wider for younger teenagers. In general, the younger an adolescent is upon beginning sexual activity, the less likely she or he is to use contraception. Stable enduring relationships are characterized by more consistent contraceptive use because the perceived risk is higher, the partners are more likely to discuss contraception, and planfulness is more acceptable in this context (e.g., Kallen, 1976). Zelnik and Kantner (1980) found in their national survey of metropolitan women that usage is greater among white adolescents; their 1972 data indicate that teenagers whose parents have some college experience tend to use contraceptives more consistently than other groups. Although race and SES are usually confounded, Zelnik and Kantner's as well as other data suggest higher usage rates among teenagers of higher socioeconomic status. These relationships between privilege and contraceptive usage are often attributed to higher educational and economic aspirations which increase the personal costs of an early pregnancy (e.g., Klein, 1978; Luker, 1975).

In spite of greater sexual activity and an increase in contraceptive usage, teenagers continue to be relatively ignorant about pregnancy risk and contraception. Only 41 percent of Zelnik and

Kantner's 1976 sample had the correct idea of the period during the menstrual cycle that was the "dangerous" time; many thought it was the safe time. Blacks tended to be more poorly informed than whites.[1] Other studies report similar misinformation (Mindick and Oskamp, 1977; Reicheldt and Werley, 1975; Finkel and Finkel, 1975). Such irregular and low levels of biological knowledge contribute significantly to pregnancies among those adolescents who are sexually active and unprotected by contraception.

However, a number of studies suggest that in many cases neither knowledge nor uncertainty about the risk of pregnancy is sufficient to motivate a teenager to seek contraceptive counseling or devices. Many intra- and interpersonal resistances exist that must be reduced or eliminated before effective contraceptive practice can occur.

A major difficulty is that contraception is neither discussed nor shared. Scales (1978, 1977) notes that many male teenagers never worry about pregnancy, and few feel a need to discuss contraception. Female adolescents rarely trust their partners with any contraceptive responsibility though they may be reluctant or unable to take on the responsibility themselves.

One difficulty female teenagers have in using contraceptive devices concerns the sporadic and infrequent sexual activity which often characterizes teenage relationships. The most effective devices, the pill and IUD, seem like overkill to many. Yet other methods more suited

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[1] Panel research which asked women biological knowledge questions found that many apparently correct answers represented guesses only (Presser, 1977). This suggests that Zelnik and Kantner's figure might overrepresent actual knowledge.

to infrequent relations, such as diaphragms or foam, are portrayed as ineffective.[2] The result in some cases is that no contraception is used.

A major psychological barrier to contracepting is that planning of some sort is required and planning implies both intent and responsibility. Many teenagers have not yet accepted themselves as sexual--taking a diaphragm on a date too clearly indicates to a teenager and her partner that she expects and wants to have sex.

A critical constraint on use of contraceptives by teenagers is developmental immaturity. Cvetkovich et al. (1975) suggest that the egocentrism characteristic of adolescents allows many to generate a "personal fable" in which they assume a special relationship with the world. This special relationship may allow an adolescent to believe that she cannot become pregnant. In Zellman's (1981) study of pregnant and parenting teenagers, many teenagers said they couldn't believe "it" (pregnancy) could happen to them. They often had reasons for feeling invulnerable, e.g., "I was too young," "we only did it two times." These feelings of invulnerability are often reinforced by several instances of unprotected intercourse that do not result in pregnancy. Furstenberg (1976) notes that since there is a time lag between onset of menarche and onset of ovulation that may be as long as two years, many adolescents who begin having intercourse at young ages may find their

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[2] Barrier methods show large variances in use effectiveness. They may be as effective as IUDs if used correctly, but most users of barrier contraceptives are unable to obtain this high level of protection. Psychological acceptance is necessary for effective use, and this is often lacking (Bruce and Schearer, 1979).

denial of the risk of pregnancy and their feelings of invulnerability reinforced.[3]

WANTEDNESS

Even if contraceptive usage among teenagers were vastly increased, some percentage of teenage conceptions would not be prevented because pregnancy is wanted. A large psychological literature, generally based on psychoanalytic theory, suggests that teenagers may want babies (consciously or not) as a means of meeting psychological needs that are not being fulfilled in other ways. Poor reality testing, recent object loss and masochism may result in sexual acting out, nonuse of contraceptive devices and a desire for a child (e.g., Rader, Bekker, Brown and Richardt, 1978; Shaffer, Pettigrew, Wolkind and Zajicek, 1978).

More sociological interpretations point to the importance of peer norms and peer behavior on an individual's sexual behavior (e.g., Teddlie, Newcomer, Odry, Bauman, Smith, and Gilbert, 1979). Peer norms, which increasingly dictate early sexual experience, influence many teenagers to have sex at an early age (Zellman and Goodchilds, forthcoming). And in some subgroups of teenagers, young women are experiencing new pressures to have a baby as a means of "proving their love" and keeping a boyfriend (Zellman, 1981).

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[3] A pregnancy often is effective in motivating contraceptive usage because it undermines feelings of invulnerability and increases perceived susceptibility to pregnancy. A number of studies affirm that the majority of adolescents accept contraceptive methods after abortion and pregnancy (Evans, Selstad and Welcher, 1976; Cobliner, et al., 1973; Osofsky and Osofsky, 1972; Klein, 1974; Jorgensen, 1973), and note that the majority of adolescents are still using contraception at follow-up intervals.

Zelnik and Kantner (1980) found that among unmarried teenagers who had been premaritally pregnant or were premaritally pregnant at the time of the study, 18 percent reported that they had wanted to become pregnant; this represented a decrease from the 24 and 25 percent in 1971 and 1976, respectively, who described their pregnancy as wanted.

PREGNANCY RESOLUTION DECISIONMAKING

While some adolescent conceptions may be "part-way planned,"[4] most are not. Therefore, where pregnancy is confirmed, a decision must be made about how to resolve it. In recent years, pregnant adolescents have been making different decisions about how to resolve their pregnancies. More are opting for abortion, and far fewer who decide to carry to term are marrying or relinquishing their infants for adoption.

Abortion. The first decision that must be made is whether or not to terminate the pregnancy. Available data indicate that from 1974 to 1976 the number of reported and estimated abortions increased by 26.8 percent for 15-19-year-olds and by 14.2 percent for those under 15 (Center for Disease Control, 1978). Zelnik and Kantner (1980) report that the incidence of induced abortion among their 15-19-year-old respondents increased from 23 percent in 1971 to 37 percent in 1979. Those under 14 are more likely to abort than older teenagers. Females 14 and under were more likely, in 1976, to terminate a pregnancy than carry it to term (the ratio of abortions to live births was 1114/1000) (Center for Disease Control, 1978).

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[4] This term was used by one of Zellman's (1981) respondents to describe her pregnancy.

Available data indicate that whites are more likely to abort a teenage pregnancy than blacks (Zelnik and Kantner, 1972, 1978, 1980; Baldwin, 1977). In a sample of Hispanics and whites, Eisen, Leibowitz, Zellman, Chow, and Evans (1980) found that being Hispanic was significantly associated with a decision not to abort.

Several studies report data which suggest that as the cost of early pregnancy increases, abortion becomes a more likely decision. Several investigators have found a relationship between school achievement and abortion decisions, with higher achievers (measured by grades, appropriate grade level, or school enrollment rather than dropout) more likely to terminate a teenage pregnancy (Hansen, Stroh, and Whitaker, 1978; Card and Wise, 1978; Fischman, 1977; Eisen et al., 1980). One indirect measure of high perceived cost of a pregnancy is the use of contraception to avoid it. Evans et al.'s (1976) finding of greater contraceptive usage among teenagers who chose to abort than those who decided to deliver supports this view.

A range of data suggest a relationship between socioeconomic status and the decision to abort. Cutright (1972), Reiss (1976) and Herzog (1962) characterize unmarried teenage motherhood as a problem of the poor. Leibowitz, Eisen and Chow (1980) found that welfare status was associated with a decreased rate of abortion in their sample of white and Hispanic teenagers.

Eisen, Leibowitz, Zellman, Chow and Evans (1980) found, not surprisingly, that attitudes toward abortion were the most powerful factor in influencing the decision to terminate a pregnancy among the Hispanic and white teenagers in their sample. The more accepting of

abortion an adolescent was, the more likely she was to actually choose abortion for herself. (Data from Bracken, Klerman and Bracken (1978) corroborate these findings with another sample; Fischman (1977) notes the importance of abortion attitudes in predicting pregnancy resolution decisions in a sample of black teenagers.) Attitudes toward abortion in the Eisen et al. study were most strongly influenced by girlfriends, less so by the would-be father's views. The decision to abort was also influenced by a teenager's perceptions of her own mother's feelings about abortion.

Marriage. Teenage pregnancy may also be resolved by marriage. Teenagers who choose this option are less likely to receive welfare in the short run, but run a high risk of divorce and subsequent welfare dependency. Marriage has also been found to reduce the likelihood of school completion among teenage mothers. Moore and Hofferth (1978) found that married mothers were twice as likely to leave school as unmarried mothers.

Teenagers are far less likely to marry now than they were 10 years ago (Baldwin, 1977; Zelnik and Kantner, 1978, 1980). Between the 1960-64 and 1970-74 periods, the percentage of conceptions that led to marriage decreased from 65 percent to 35 percent (Baldwin, 1977). Indeed, decisions not to marry explain the soaring "illegitimacy" rate in the face of declining birthrates among teenagers. Black teenagers are much less likely to marry than whites and are more likely to remain single and deliver a premarital pregnancy (Kantner and Zelnik, 1972). In recent years the racial difference has declined to some extent (Zelnik, Kantner, 1980). Evans, Selstad and Welcher (1976) report that

among the adolescents in their sample of Hispanics and whites rejecting abortion, Hispanics were more likely than whites to remain single. High school dropouts and those with lower school grades were more likely to remain single than to marry. Eisen et al. (1980) report that, among teenagers who decide to deliver, only one variable aside from the concurrence of the would-be father--receipt of welfare--discriminated single from married motherhood. Teenagers whose families received AFDC or Medicaid were more likely to remain single than to marry.

Zellman (1981), in interviewing over 100 pregnant and parenting teenagers, observed that marriage is the pregnancy resolution decision that often receives the most careful and thoughtful consideration.[5] She found that teenagers who decide to deliver their baby and remain single do so for several reasons. First, the would-be husband is judged to be "poor husband material." Respondents noted youthfulness, lack of a steady job or immaturity in this regard. Second, a number of female respondents rejected marriage because they did not wish to marry for the wrong reasons, i.e., to legitimize a child. Third, a number noted that the institution of marriage itelf was not advantageous at this stage in their lives. Marriage would impose costs, e.g., the added responsibility of a husband, and cause loss of benefits, e.g., "live in" child care from the baby's grandmother.

Adoption. Pregnant adolescents can escape the responsibilities of parenthood by relinquishing a baby for adoption. However, adoption is becoming an infrequent way of resolving teenage pregnancies (Bracken,

[5] She notes that teenagers feel relatively free to consider married versus single parenthood because peers are generally accepting of either course.

Klerman and Bracken, 1978). One reason for its declining popularity is that norms against adoption are strong among teenagers. Peers often judge a mother much more harshly for relinquishing her baby than for becoming pregnant in the first place (Zellman, 1981). Relinquishment rates have also declined in the face of easier availability and greater acceptance of abortion. Those pregnant teenagers most highly motivated not to assume the role of parent may elect abortion rather than adoption as a means of resolving an unwanted pregnancy.

III. CONSEQUENCES OF PARENTHOOD

The assumption of parental responsibilities during adolescence has long-term consequences, particularly for the adolescent mother. School dropout, lowered aspirations, and further unintended childbearing have been found to occur more frequently among adolescent parents than among their nonparenting peers. These in turn are associated with a reduction in subsequent well-being, as judged by such measures as earnings, household income, poverty status and marital stability.

TRUNCATION OF FURTHER EDUCATION

Adolescent parenthood may diminish educational attainment in several ways: (1) by prompting the pregnant or parenting student to drop out of school, (2) by indefinitely postponing further schooling by those who aspire to more education, and (3) by lowering long-term aspirations.

Although pregnancy and parenthood are generally agreed to be major factors in school dropout among young women, the research findings usually are not amenable to clear, unambiguous interpretation. A major problem involves determining the causal and temporal relationship between pregnancy, parenthood, and school dropout. For example, pregnancy confirmation may precipitate school dropout by a student with realistic ambitions for a professional career; another pregnant student may drop out when her pregnancy is confirmed, but in this case the student had no career goal and disliked school; pregnancy gave her a socially acceptable reason to leave. In either case, an association

between pregnancy and school dropout would be apparent in the data, but it would be incorrect to infer a causal relationship between pregnancy and curtailment of education in the second instance (Haggstrom, et al., forthcoming).

When a causal relationship has been established between pregnancy and parenthood and school dropout, another uncertainty arises: How much of the deficit in educational attainment will prove to be permanent? This question can be resolved only through long-term follow-up of teenage parents to determine how much of an initial educational deficit eventually is made up in adulthood. Available studies that involve long-term follow-up necessarily refer to people who became adolescent parents many years ago under sharply different sociocultural circumstances. To what extent the conclusions of such studies apply to contemporary circumstances is open to question.

With these important caveats in mind, we summarize below the salient findings that emerge from the literature we have examined.

Dropping Out of School

National data indicate that pregnancy and parenthood are often contributing factors when young women drop out of school. Data from Bacon (1974), for example, reveal that age at first birth strongly influenced the percentage of women who completed high school. For blacks as well as whites, more than four-fifths of those who became mothers prior to age 18 failed to finish high school.[1] A national

[1] Bacon's analysis is based on a national probability sample of ever-married mothers who became parents prior to 1967.

survey which compared high school graduates to nongraduates found that 56 percent of white female dropouts and 62 percent of black female dropouts cited marriage or pregnancy as the reason for leaving school (Mott and Shaw, 1978). A number of other studies (e.g., Trussell, 1976; Furstenberg, 1976; Presser, 1975; Huber, 1970 and Coombs and Cooley, 1968) corroborate these findings.

Most of these data were collected prior to 1975, when Title IX of the 1972 Education Amendments took effect. Title IX prohibits schools receiving federal funds (hence, virtually all public schools) from excluding any student on the basis of pregnancy or parenthood. Exclusion, which was standard policy in most school districts before that time, surely contributed to the high rate of school dropout associated with teenage pregnancy.

Besides Title IX, growing acceptance of sexual behavior, including pregnancy, among teenagers themselves, may be operating to reduce the school dropout rate among pregnant and parenting teenagers (Zellman, 1981). Given this more tolerant social climate, many pregnant teenagers see no reason to conceal a pregnancy as they did a generation ago; embarrassment about a pregnancy is less likely to motivate school dropout than it did in the past.

A third development that may have an effect on school dropout rate is a response on the part of some school districts to the needs of pregnant and parenting students. In the 1960s and 1970s a number of districts established special programs designed to encourage school continuation during pregnancy and increase the probability of high school graduation. While few of these programs have been evaluated in a

rigorous way, outcome data suggest that at least some of the better ones have been successful in preventing dropout during pregnancy and facilitating school completion in some cases (Klerman, 1979).[2]

No studies using post-1975 data are available to shed light on the impact of these developments on school dropout among pregnant and parenting students. However, it seems clear that pregnancy and parenthood continue to pose obstacles to school continuation. Difficulties in finding child care, the need to work, and the desire to spend time with a young child increase the difficulty of continued school attendance.

Reduced Years of Completed Schooling

School dropout precipitated by a pregnancy may not be permanent in every instance, and some young mothers never drop out at all (e.g., Furstenberg, 1976; Howard, 1968). School programs designed to facilitate school continuation during and after pregnancy have been somewhat effective in keeping enrollees in school during pregnancy and to a lesser extent after delivery (e.g., Foltz, Klerman and Jekel, 1972).[3]

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[2] Program evaluations by Klerman and Jekel (1973) and Howard (1968) indicate improved educational outcomes for enrollees compared to a control group. While these outcomes may be no better than those for teenage mothers in regular high schools (Furstenberg, 1976), this comparison ignores the possibility that special and regular program enrollees differ in important ways. Most educators believe that mothers who return to school are more academically oriented than those who do not; those who choose to remain in a regular high school (especially when a special program is available off campus) are especially committed to an education (Zellman, 1981). For this latter group, internal motivation (combined with child care resources) may be sufficient to insure school completion; those less motivated may depend on a special program to facilitate this achievement.

Decreasing marriage rates among pregnant teenagers may also contribute to higher rates of school continuation and return among young mothers. Unmarried parents often live with their families of origin, who provide emotional and material support to the young mother and her child (Furstenberg, 1980; Furstenberg and Crawford, 1978). Moore et al. (1979) indicate that while teenage parenthood is associated with school dropout, unmarried parents are only half as likely to drop out.

While these trends are encouraging, available (hence older) data indicate that in the aggregate teenage parenthood has long-term disruptive effects on educational attainment. Evidence of this disruption is apparent in the following points.

1. The teenage mother completes fewer years of schooling than her nonparent peers (Waite and Moore, 1978; Moore and Hofferth, 1978). The estimated size of this deficit varies from study to study, reflecting different populations examined and background variables controlled; such estimates also are sensitive to when in adulthood educational attainment is measured. There are indications, however, that educational achievement and early childbearing are linked in opposite ways for different segments of the adolescent population (Trussell, 1976). Among some, pregnancy appears to induce dropping out of school; among others, the factors that predispose less schooling (or result from less schooling) are conducive to adolescent pregnancy.

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[3] Evidence suggests that the effectiveness of these programs depends to some extent on self-selection among program enrollees. Those inclined to drop out of school often don't enroll in the program at all. See Zellman (1981) for further discussion of school career decisionmaking among pregnant teenagers.

2. The younger the age at first birth, the fewer years of schooling completed (Bacon, 1974; Trussell, 1976; Waite and Moore, 1978). One study, for example, estimates that young women who became mothers at age 15 or younger completed about 1.4 fewer years of schooling by age 24 than did their peers who delayed motherhood until ages 16 or 17, and 1.9 years less than those who waited until 18 to bear their first child (Waite and Moore, 1978). There is some evidence that this age-at-parenthood effect operates differently for blacks than for whites.[4]

3. The educational deficit associated with an early first birth is less for young black women than for their white counterparts (Card, 1977; Waite and Moore, 1978). For example, it is estimated that a first birth at age 15 or younger results in twice the educational deficit for young white women than it does for young black women: 3.1 years versus 1.4 years of schooling by age 24 (Waite and Moore, 1978). Proposed explanations of this difference, which prevails throughout the adolescent age range, focus on two cultural differences between blacks and whites: (a) the lesser degree of social stigma that is associated with premarital childbearing among blacks, and (b) the more highly evolved social mechanisms within the black family for coping with parenthood (Waite and Moore, 1978;

[4] Card (1977) reports that black females who became parents before age 17 find it harder than whites to return to school, whereas those who became parents at 17 or later are not similarly burdened.

Furstenberg and Crawford, 1978). According to this view, the young black mother's life is less severely interrupted than that of her white counterpart by the presence of the baby, and she is better able to stay in school during pregnancy and continue with her education thereafter.[5]

4. Adolescent childbearing appears to have a greater impact on the subsequent lives of teenagers with high academic abilities than it does on their less able classmates. For both males and females, the schooling deficit associated with early parenthood is larger for those planning to go to college than for those not so planning (Card, 1977).

Overall, these results underscore the timing of fertility as a critical influence on female educational attainment, especially for whites. Since educational attainment is known to be a powerful determinant of occupation and earnings, early childbearing is likely to diminish the overall status attainment of women. However, the causal significance of childbearing per se is less certain. As discussed earlier, teenagers who bear children may differ in a number of ways from their nonparenting peers. A variety of data suggest they do differ. As discussed above, contraceptive usage is more likely among high SES teenagers; higher achievers, if they do become pregnant, are more likely to abort than lower-achieving peers. Prospective data reported by Card and Wise (1978) indicate that at age 15, before parenthood occurred,

[5] This interpretation receives indirect support from the finding that black women are more accepting of young mothers going to work than are white women (Suter and Waite, 1979).

male and female teenagers who later became teenage parents were lower in SES, academic ability and educational aspirations than their classmates. Chilman (1978) notes that adolescent mothers also differ psychologically, tending to be lower in self-esteem and felt competence then their nonparenting peers. A prospective study by Sitkin (1972) supports this view.[6]

Lowered Aspirations

Reduced career or life aspirations may precede or rationalize a teenage parent's decision to leave school. Few data exist on this point. Zellman (1981) found in talking to over 100 teenage mothers that most did not revise downward their career aspirations as a result of pregnancy, largely because these aspirations were already low. However, those with aspirations that required college or postgraduate work did tend to revise their plans downward. They tended to plan on less schooling and careers that promised higher immediate earnings after delivery, as more "realistic" choices. A few young mothers did not modify their career goal, but had postponed the advanced education necessary to achieve it, at least for the foreseeable future.

[6] However, a number of studies discussed by Chilman (1979) (e.g., Pakter, 1969; Pope, 1967) found more similarities than differences between those who later became premaritally pregnant and those who did not. Chilman notes that while some psychological differences might well exist, at least some nonpregnant adolescents remain so only because of luck or subfecundity.

SUBSEQUENT WELL-BEING

Subsequent well-being (judged by such measures as earnings, household income, poverty status, and marital stability) is affected by early childbearing, but indirectly for the most part. For example, the mother's economic well-being is tied as much to her marital status and her husband's earning capacity as to her own earnings (Ross and Sawhill, 1975). Thus, having an early first birth may be harmful not only by limiting her job experience (and hence her own earnings) but also by limiting other possibilities of support. Moreover, the likelihood of poverty increases when teenage parenthood disrupts schooling and induces an orientation toward employment that does no more than maximize current income without regard to future prospects. Many studies (e.g., Coombs and Freedman, 1970; Hofferth and Moore, 1978) reveal a continuing income and asset disadvantage over time by those who become parents in adolescence.

The separate effects operating here can be disentangled only through multivariate analysis. Some studies, e.g., Hofferth and Moore (1978), Card and Wise (1978), have translated these complex disadvantaging effects into statistical estimates of subsequent economic well-being. Such estimates must be regarded as no more than rough barometers, of course, since they are inexact and are based on retrospective samples of adolescent childbearers that do not generalize directly to contemporary childbearers. Nevertheless, such estimates are the best indications we have of the net impact of an early birth on subsequent economic well-being. The major findings of these studies follow:

1. A delay in the age at first birth prolongs school attendance and therefore makes the young woman and her household economically better off in adulthood. One study (Hofferth and Moore, 1978) estimates that if a woman who bore her first child by age 18 or younger had delayed that birth one additional year, the following effects would have ensued: (a) total annual household income at age 27 would be $1293 higher, partly because of the greater likelihood the woman would be married and benefiting from her husband's income; (b) her own annual earnings at age 27 would be $73 higher; and (c) the probability of her household being in poverty at age 27 would be reduced about one-fifth (from .120 to .095). These effects appear to be limited to first births occurring at age 18 or younger.

   The effects of an early first birth on teenage fathers appear much smaller, though the effects may be larger in the longer term. Card and Wise (1978) found that 11 years after high school, adolescent fathers had incomes similar to their classmates who were not fathers as adolescents. Adolescent fathers, however, often start off with relatively high-paying union jobs and begin receiving raises, giving them a head start over their classmates who continue in school. It takes their classmates many years after high school to catch up, at which point they begin to realize the increased income associated with their further investment in education. Thus, Card and Wise caution that the 11-year time frame imposed by their data cannot show what happens thereafter and note that the

classmates' income will likely surpass that of the less educated teenage fathers. Haggstrom, et al. (forthcoming) concur that the economic effects of early parenthood on fathers appear small, at least in the short term. However, young fathers in their sample of high school graduates lagged behind nonfathers in both educational attainment and educational aspirations, suggesting there may be economic impacts of early fatherhood in the longer term.

2. Adolescent parents are much more likely than their classmates to hold low-prestige jobs. One study with long-term follow-up (Card and Wise, 1978) found adolescent childbearers overrepresented in blue-collar jobs and underrepresented in the professions 11 years after high school.
3. There is a strong association between early childbearing and receipt of welfare. This association can be attributed to differences between young parents and nonparents in education, family size, labor force participation, age at marriage, and race (Moore and Hofferth, 1978).

In addition to these economic effects, the marriages formed under circumstances of teenage pregnancy appear to be less stable than others (see Furstenberg, 1976; Coombs and Zumeta, 1970). This effect would seem to confirm the conventional wisdom that the combination of early marriage plus parenthood poses unique difficulties. On the other hand, marriages between people who are not fully matured may be inherently unstable, and the presence of children might well act to prevent marital dissolution. Thus, it may be the youthfulness of the couple, rather

than an early first birth per se, that results in marital break-ups. Evidence from Moore and Hofferth (1978) favors this latter conclusion: When age at marriage is controlled statistically, age at first birth was found to have no positive impact on the incidence of divorce or separation among 24-year-old women. Thus, it appears that teenage childbearing affects the risk of divorce and separation indirectly rather than directly, i.e., by precipitating early marriages rather than by destabilizing them.

FURTHER UNINTENDED CHILDBEARING

Parenthood in early adolescence often marks the beginning of a rapid succession of unwanted births. Women who start childbearing in their teens have more children, have them closer together, and bear more unwanted children than do women who delay first births (Trussell and Menken, 1978; Menken, 1975; Bonham and Placek, 1975; Bumpass et al., 1978). Apparently this results less from conscious intent than from more frequent occurrences of unplanned births.

To what extent the early first birth should be seen as a causal factor is unclear (Busfield, 1972). The more rapid pace of subsequent childbearing that is a characteristic of early childbearers may well be the product of self-selection: People who want to have children may marry early or begin reproducing early, or both, and reproduce at a rapid pace. Bonham and Placek (1975), for example, report that the younger the woman is at the time of her first birth, the more children she eventually expects to have. Differential fecundity (which cannot be directly measured) or inept contraceptive practice also could account

for an observed association between early and more frequent childbearing without there being a causal link. Again, self-selection may well account for part, if not all, of the observed relationship here.

A teenage pregnancy may not always initiate rapid subsequent childbearing. Furstenberg (1976) found that highly ambitious teenage mothers generally were able to prevent subsequent teenage pregnancies. Those who returned to school had far fewer subsequent teenage pregnancies than those for whom pregnancy precipitated school dropout.

However, to the extent that early childbearing does initiate a career of rapid childbearing and lead to higher completed fertility, it must be regarded as indirectly disruptive of attainment. A young mother's first pregnancy may only interrupt her education, but bearing additional children usually ends it for good. Putting matters another way, postponing an early first birth would enable the young woman or man to discover valuable activities in life other than childbearing that contribute to individual self-realization.

CONCLUSION

Becoming a parent during adolescence is far from a random event. Available research indicates often substantial differences among those who have sex or abstain, who contracept or not, who choose to abort or carry to term, and who marry or remain single.

Parenthood reduces adolescents' life-chances in a variety of ways, and the effects generally are stronger the younger the age at which the first birth occurs. Research often cannot establish whether pregnancy and parenthood play a critical causal role. However, there is strong

circumstantial evidence that a person who manages to avoid parenthood during adolescence will acquire more of the schooling and training necessary to realize her or his full potential as a self-sufficient adult and will be better off economically and socially in adulthood.

The deleterious consequences of adolescent parenthood are not inevitable; research findings reviewed above suggest how its incidence could be reduced and its negative effects lessened:

- As peer norms increasingly dictate sexual behavior, many adolescents feel compelled to have sex to maintain self-esteem, social status or a partner, whether or not they feel ready to do so. Adolescents need support for considering the option not to engage in sex. They also need to learn other ways to achieve self-esteem and social status. Respondents to Zellman's (1981) study suggested a number of means to achieve these goals, including assertion training, discussion of peer norms by school staff, and support groups for young women.
- The data suggest that teenagers who have fairly well-defined career goals or aspirations are more motivated to avoid pregnancy. This group tends to use contraception more consistently and is more likely to opt for abortion if pregnancy occurs than less motivated peers. Educational ambition and career planning are often left to the individual, and therefore depend heavily on personal and family motivation and pressure. The schools could be far more active in encouraging career planning and fostering career ambitions, particularly among female students, many of whom imagine, erroneously, that they will not need to work.

- Lack of planfulness, inability to accept themselves as sexual, and feelings of invulnerability lead to sporadic or nonuse of contraceptive devices among many sexually active teenagers. Medical personnel need to be more sensitive to these distincly "adolescent" barriers to effective contraceptive use when counseling about and prescribing contraceptive devices.

  The often sporadic nature of their sexual behavior leads many teenagers to perceive the pill and IUD--the most clinically effective devices--as overkill. Many are aware of and fear the side effects of the pill. Yet these devices are frequently recommended strongly by medical personnel, while other devices more suited to sporadic contact, such as diaphragms and condoms, are downplayed for being "less effective." The relative advantages and disadvantages for teenagers of the available methods might well be reevaluated.

  Follow-up is a critical but often overlooked aspect of adolescent contraceptive counseling. Teenagers would benefit from more follow-up on a more regular basis. Primary care clinics located in high schools are able to provide close follow-up since patients are in the building every day (Zellman, 1981). Other clinics, not so advantageously located, should consider other ways to motivate and follow-up on contraceptive compliance.

- Pregnancy resolution decisions are generally made by the pregnant adolescent, her family and in some cases, the

prospective father. School staff rarely play any role in these decisions, believing they are both personal and problematic. Consequently, these decisions are usually made without any consideration for their educational or long-term career implications. A more active, informational role by the schools would help to improve these decisions. Those who decide to carry the pregnancy and raise the child could be helped to begin the long-term planning necessary to successfully integrate the roles of student, parent, and (later) employee.

- When an adolescent becomes a parent, she needs a wide range of services and support to successfully assume her role as parent while continuing and necessarily modifying her adolescent and student roles. Problems with day care, fatigue, finances, and illness of a child, among others, are real but extrinsic. Provision of services in the schools or the broader community to meet these needs may make school continuation possible and reduce the negative consequences of adolescent parenthood.

REFERENCES

Apkom, C. A., K. L. Apkom, and M. Davis. Prior Sexual Behavior of Teenagers Attending Rap Sessions for the First Time. Family Planning Perspectives, 1976, 8, pp. 203-206.

Bacon, Lloyd. Early Motherhood, Accelerated Role Transition, and Social Pathologies. Social Forces, 1974, 52, pp. 333-341.

Baldwin, Wendy. Adolescent Pregnancy and Childbearing--An Overview. Seminars in Perinatology, 1981, V, No. 1, January.

Baldwin, Wendy. Adolescent Pregnancy and Childbearing--Growing Concerns for Americans. Population Bulletin, 1977, 31 (2), pp. 3-34. Population Reference Bureau, Inc., Washington, D.C.

Baldwin, Wendy. Statement on Trends in Adolescent Pregnancy and Childbearing before the Senate Human Resources Committee, United States Senate, June 14, 1978. Mimemographed.

Bolton, F. G. The Pregnant Adolescent: Problems of Premature Parenthood. Beverly Hills: Sage, 1980.

Bonham, Gordon, and Paul Placek. The Impact of Social and Demographic, Maternal Health and Infant Health Factors on Expected Family Size. Paper presented at the 1975 Population Association of America meeting.

Bracken, M. B., L. V. Klerman, and M. Bracken. Abortion, Adoption or Motherhood: An Empirical Study of Decisionmaking During Pregnancy. American Journal of Obstetrics and Gynecology, 1978, 130, pp. 251-262.

Brown, Sarah S., et al. Young Adults as Partners and Planners. Paper presented at the 1975 American Public Health Association meetings, Chicago.

Bruce, J., and S. B. Schearer. Contraceptives and Common Sense: Conventional Methods Reconsidered. New York: The Population Council, 1979.

Bumpass, Larry, et al. Age and Marital Status at First Birth and the Pace of Subsequent Fertility. Demography, 1978, 15 (1), pp. 75-86.

Busfield, Joan. Age at Marriage and Family Size: Social Causation and Social Selection Hypotheses. Journal of Biosocial Science, 1972, 4, pp. 117-134.

Card, Josefina J., and Lauress L. Wise. Teenage Mothers and Teenage Fathers: The Impact of Early Childbearing on the Parents' Personal and Professional Lives. Family Planning Perspectives, 1978, 10 (4), pp. 199-205.

Card, Josefina J. Consequences of Adolescent Childbearing for the Young Parent's Future Personal and Professional Life, American Institutes for Research, Palo Alto, Calif., 1977.

Center for Disease Control. Teenage Childbearing and Abortion Patterns. 1976. Morbidity and Mortality Weekly Report, 1978, 10, pp. 199-205.

Chilman, C. S. Illegitimate Births to Adolescents: An Overview of Social and Psychological Research. Marriage and Family Review, 1979, 2, pp. 1-11.

Chilman, C. S. Adolescent Sexuality in a Changing American Society: Social and Psychological Perspectives. Washington, D.C.: U.S. Government Printing Office, 1978.

Cobliner, W. G., H. Schulman, and S. L. Romney. The Termination of Adolescent Out-of-Wedlock Pregnancies and the Prospects for Their Primary Prevention. American Journal of Obstetrics and Gynecology, 1973, 115, pp. 432-44.

Coombs, J., and W. W. Cooley. Dropouts: In High School and After High School. American Educational Research Journal, 1968, 5.

Coombs, L. C., and R. Freedman. Pre-Marital Pregnancy, Childspacing, and Later Economic Achievement. Population Studies, 1970, 24 (3), pp. 389-412.

Coombs, L. C., and Z. Zumeta. Correlates of Marital Dissolution in a Prospective Fertility Study: A Research Note. Social Problems, 1970, 18, pp. 92-102.

Cutright, P. Illegitimacy in the United States, 1920-1968. In C. Westoff and R. Parks (eds.), Demographic and Social Aspects of Population Growth. Washington, D.C.: U.S. Government Printing Office, 1972.

Cvetkovich, G., and B. Grote. Current Research on Adolescence and Its Program Implications. Paper presented at joint meeting of the Washington State Council on Family Planning and the Washington Alliance Concerned with School Age Parents. Olympia, Washington, September 1977.

Eisen, M., A. Leibowitz, G. L. Zellman, W. K. Chow, and J. Evans. Factors Discriminating Pregnancy Resolution Decisions of Unmarried Adolescents. Santa Monica: The Rand Corporation, 1980.

Evans, J., G. Selstad, and W. Welcher. Teenagers: Fertility Control Behavior and Attitudes. Family Planning Perspectives, 1976, 8, pp. 192-200.

Finkel, M., and D. Finkel. Sexual and Contraceptive Knowledge, Attitudes and Behavior of Male Adolescents. Family Planning Perspectives, 1975, 7, pp. 256-260.

Fischman, S. Delivery or Abortion in Inner-City Adolescents. American Journal of Orthopsychiatry. 1977, 47, pp. 127-133.

Foltz, A. M., L. V. Klerman, and J. Jekel. Pregnancy and Special Education: Who Stays in School? American Journal of Public Health, 1972, 62, pp. 1612-1619.

Furstenberg, F. F., Jr. The Social Consequences of Teenage Parenthood. Family Planning Perspectives, 1976, 8 (4), pp. 148-164.

Furstenberg, F. F., Jr., and Albert G. Crawford. Family Support: Helping Teenage Mothers to Cope. Family Planning Perspectives, 1978, 10 (6), pp. 322-333.

Furstenberg, F. F., Jr. Burdens and Benefits: The Impact of Early Childbearing on the Family. Journal of Social Issues, 1980, 36, pp. 64-87.

Furstenberg, F. F., Jr. Unplanned Parenthood: The Social Consequences of Teenage Childbearing. New York: Free Press, 1976.

Haggstrom, Gus W., Thomas J. Blaschke, David E. Kanouse, William Lisowski, Peter A. Morrison. Teenage Parents: Their Ambitions and Attainments. The Rand Corporation, forthcoming.

Hansen, Holger, G. Stroh, and K. Whitaker. School Achievement: Risk Factor in Teenage Pregnancy. American Journal of Public Health, 1978, 68, (8), pp. 753-759.

Hass, A. Teenage Sexuality. New York: Macmillan, 1979.

Herzog, E. Unmarried Mothers, Some Questions to be Answered and Some Answers to be Questioned. Child Welfare, 1962, 41, 339-350.

Hofferth, Sandra L., and Kristin A. Moore. Age at First Birth and Later Economic Well-Being. The Urban Institute, Washington, D.C., 1978.

Howard, M. The Webster School: A District of Columbia Program for Pregnant Girls. Washington, D.C.: Children's Bureau, 1968.

Huber, Joe. Married Students Vs. Married Dropouts. Phi Delta Kappan, 1970, 52, (2), pp. 115-116.

Jorgensen, V. One-Year Contraceptive Followup of Adolescent Patients. Fertility and Sterility, 1973, 115, pp. 484-486.

Kallen, D. J. Factors Influencing Contraceptive Use and Choice Among Unmarried Adolescents. NIH Grant Proposal, 1978.

Kantner, J. F., and M. Zelnik. Sexual Experience of Young Unmarried Women in the United States. Family Planning Perspectives, 1972, 4 (4), pp. 9-18.

Klein, L. Antecedents to Teenage Pregnancy. Clinical Obstetrics and Gynecology, 1978, 32, 1151-59.

Klein, L. Early Teenage Pregnancy, Contraception and Repeat Pregnancy. American Journal of Obstetrics and Gynecology, 1974, 120, pp. 249-56.

Klerman, L. V. Evaluating Service Programs for School-Age Parents: Design Problems. Evaluation and the Health Professions, 1979, 1, pp. 55-70.

Klerman, L. V., and J. F. Jekel. School-Age Mothers: Problems, Programs and Policy. Hamden, Connecticut: Shoe String Press, 1973.

Leibowitz, A., M. Eisen, and W. K. Chow. Decisionmaking in Teenage Pregnancy: An Analysis of Choice. Santa Monica: The Rand Corporation, 1980.

Luker, K. Taking Chances: Abortion and the Decision Not to Contracept. Berkeley: University of California Press, 1975.

Menken, Jane. The Health and Demographic Consequences of Adolescent Pregnancy and Childbearing. Paper presented at the Conference on Research on the Consequences of Adolescent Pregnancy and Childbearing, sponsored by the Center for Population Research, NICHD and the Alan Guttmacher Institute, Washington, D.C., October 29-30, 1975.

Miller, Patricia Y., and William Simon. Adolescent Sexual Behavior: Context and Change. Social Problems, 1974, 22 (1), pp. 58-75.

Mindick, B., and V. S. Oskamp. Teenage Contraceptors in Metropolitan Southern California. Paper presented at meetings of the American Psychological Association, 1977.

Moore, Kristin A., and Sandra L. Hofferth. The Consequences of Age at First Birth: Final Research Summary. Working Paper 1146-07, The Urban Institute, Washington, D.C., August, 1978.

Mott, F. L., and L. Shaw. Work and Family in the School Leaving Years: A Comparison of Female High School Graduates and Dropouts. Unpublished manuscript, Ohio State University, 1978.

National Center for Health Statistics. Age at Menarche: United States. Vital and Health Statistics, Series 11, No. 133, 1973.

National Center for Health Statistics. Monthly Vital Statistics Report 27(11) Supplement, February 5, 1979.

National Center for Health Statistics. Monthly Vital Statistics Report 29(1), April 28, 1978.

O'Connell, Martin. A Cohort Analysis of Teenage Fertility in the U.S. Since the Depression. Paper given at the 1978 Population Association of America meetings.

Osofsky, D., and J. Osofsky. The Psychological Reaction to Legalized Abortion. American Journal of Orthopsychiatry, 1972, 42, pp. 42-60.

Pakter, J. Research discussed in The Double Jeopardy, The Triple Crisis. New York: National Council on Illegitimacy, 1969.

Pope, H. Unwed Mothers and Their Sex Partners. Journal of Marriage and the Family, 1967, 29, pp. 555-67.

Presser, H. B. Early Motherhood: Ignorance or Bliss? Family Planning Perspectives, 1974 6 (1), pp. 8-14.

Presser, H. B. Guessing and Misinformation About Pregnancy Risk Among Urban Mothers. Family Planning Perspectives, 1977, 9.

Presser, H. B. Social Consequences of Teenage Childbearing. Paper presented at the Conference on Research on the Consequences of Adolescent Pregnancy and Childbearing, sponsored by the Center for Population Research, NICHD and the Alan Guttmacher Institute. Washington, D.C., October 29-30, 1975.

Rader, G. E., L. D. Bekker, L. Brown and C. Richardt. Psychological Correlates of Unwanted Pregnancy. Journal of Abnormal Psychology, 1978, 87, pp. 373-376.

Reicheldt, P. and H. H. Werley. Contraception, Abortion and Venereal Disease: Teenagers' Knowledge and Effects of Education. Family Planning Perspectives, 1975, 7, pp. 83-88.

Reiss, I. L. Family Systems in America. Hinsdale, Illinois: Dryden Press, 1976.

Ross, H. L., and I. V. Sawhill. Time of Transition: The Growth of Families Headed by Women. The Urban Institute, Washington, D.C., 1975.

Scales, P. How We Guarantee the Ineffectiveness of Sex Education. SIECS Report 1978, 5, pp. 1-16.

Scales, P. Males and Morals: Teenage Contraceptive Behavior Amid the Double Standard. Family Coordinator, 1977, 26, pp. 211-220.

Shaffer, D., A. Pettigrew, S. Wolkind and E. Zajicek. Psychiatric Aspects of Pregnancy in Schoolgirls: A Review. Psychological Medicine, 1978, 8, pp. 119-130.

Sitkin, E. M. Measurement of Prospective Fantasy and Other Factors in Pregnant Black Teen-age Girls. Ph.D. dissertation, Columbia University, 1972.

Suter, L. and L. J. Waite. Worker, Housewife, Mother: Role Decisions of Young Women. Paper presented at meetings of the American Sociological Association, 1975.

Teddlie, C., S. Newcomer, J. R. Odry, K. E. Bauman, M. L. Smith, and M. Gilbert. Determinants of Adolescent Sexual Behavior: Biological, Social and Psychological Factors. Paper presented at meetings of the American Psychological Association, 1979.

Trussell, T. J. Economic Consequences of Teenage Childbearing. Family Planning Perspectives, 1976, 8 (4), pp. 184-190.

Trussell, T. J., and J. Menken. Early Childbearing and Subsequent Fertility. Family Planning Perspectives, 1978, 10 (4), pp. 209-218.

Vener, A. M., and C. S. Stewart. Adolescent Sexual Behavior in Middle America Revisited: 1970-1973. Journal of Marriage and the Family. 1974, 36, pp. 728-35.

Waite, L. J., and K. A. Moore. The Impact of an Early First Birth on Young Women's Educational Attainment. Social Forces, 1978, 56 (3), pp. 845-865.

Zellman, G. L., and J. D. Goodchilds. Becoming Sexual in Adolescence. In E. Allgeier and N. McCormick (eds.), Gender Roles and Sexual Behavior: Changing Boundaries. Palo Alto: Mayfield, in preparation.

Zellman, G. L. The Response of the Schools to Teenage Pregnancy and Parenthood. Santa Monica: The Rand Corporation, 1981.

Zelnik, M., and J. F. Kantner. Contraceptive Patterns and Premarital Pregnancy Among Women Aged 15-19 in 1976. Family Planning Perspectives, 1978, 10 (3), pp. 135-142.

Zelnik, M., and J. F. Kantner. First Pregnancies to Women Aged 15-19: 1976 and 1971. Family Planning Perspecives, 10, 1978.

Zelnik, M., and J. F. Kantner. Sexual Activity, Contraceptive Use and Pregnancy Among Metropolitan-Area Teenagers: 1971-79. Family Planning Perspectives, 1980, 12, pp. 230-237.

Zelnik, M., and J. F. Kantner. Sexual and Contraceptive Experience of Young Unmarried Women in the United States, 1976 and 1971. Family Planning Perspectives, 1977, 9, pp. 55-58.

Zelnik, M., and J. F. Kantner. Sexuality, Contraception, and Pregnancy Among Young Unwed Females in the United States. In Research Reports, Vol. 1, Commission on Population Growth and the American Future. U.S. Government Printing Office. Washington, D.C., 1972.